

OK to enter  
H.M.  
11/16/04

- 1 -



## SUBSTITUTE SPECIFICATION

*Clean Copy*

5

### IMAGE FORMING APPARATUS WITH ELECTROSTATIC POTENTIAL- BASED DEVELOPER CORRECTION

This application is a divisional of Application No. 09/873,292, filed June 5, 2001, now U.S. Patent No. 6,665,502.

10

#### BACKGROUND OF THE INVENTION

##### Field of the Invention

The present invention relates to an image forming apparatus that uses an electrophotographic method or an electrostatic recording method. More particularly, the invention relates to an image forming apparatus, such as a copying machine, a printer, and a FAX, among some others.

15

##### Related Background Art

Generally, a monocomponent developer using magnetic toner as the main components or two-component developer using non-magnetic toner and magnetic carrier as the main component thereof are used for the developing device that serves as developing means provided for an image forming apparatus using an electrophotographic method or an electrostatic recording means. For the image forming apparatus that forms full color or multicolor images by means of the electrophotographic method, in particular, most of the developing devices thereof adopt the two-component developer in consideration of color tones of images or the like.

20

25

As is well known, the toner density (the ratio of toner weight to the total weight of carrier and toner) of the two-component developer is an extremely important factor for stabilizing the image quality. During development, the toner of a developer is consumed to reduce the toner density of the developer. Therefore, the toner density in a developer or image density should be detected timely in order to replenish toner depending on such changes. Then, the toner density or image density is controlled to be constant at all times for the maintenance of image quality.

30

35

Here, conventionally, density control devices of various types have been proposed for the constant control of the toner density or image density by